

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An input protection circuit for protecting an internal circuit from an excessive signal originated from static electricity ~~or the like~~, comprising:

input signal conversion section which has at least an input resistor, a feedback resistor and an operational amplifier having an input, and converts a potential of an input signal input from an input terminal in such a way that said potential of said input signal lies in an input range or a range of a signal potential inputtable to said internal circuit;

first protection section, connected to a virtual ground node between said input resistor and said operational amplifier and a first power-supply potential, for protecting said internal circuit by allowing an input current of said input signal to flow toward said first power-supply potential when said potential of said input signal excessively exceeds said input range on the said first power-supply potential side; and

second protection section, connected to an arbitrary point between said input terminal and said input resistor and a second power-supply potential, for protecting said internal circuit by allowing said input current to flow toward said input terminal from said second power-supply potential when said potential of said input signal excessively exceeds said input range on the second power-supply potential side,

wherein the first protection section is connected to a first node that also connects the input of the operational amplifier, the feedback resistor and the input resistor.

2. (Currently Amended) An input protection circuit for protecting an internal circuit from an excessive signal originated from static electricity ~~or the like~~, comprising:

input signal conversion ~~section~~ means which has at least [[an]] input resistor means, [[a]] feedback resistor means and [[an]] operational amplifier means and converts a potential of an input signal input from an input terminal in such a way that said potential of said input signal lies in an input range or a range of a signal potential inputtable to said internal circuit;

first protection ~~section~~ means, connected to an arbitrary point between said input terminal and said input resistor means and a first power-supply potential, for protecting said

internal circuit by allowing an input current of said input signal to flow toward said first power-supply potential when said potential of said input signal excessively exceeds said input range on the said first power-supply potential side; and

second protection ~~section~~ means, connected to a virtual ground node between said input resistor means and said operational amplifier means and a second power-supply potential, for protecting said internal circuit by allowing said input current to flow toward said input terminal from said second power-supply potential when said potential of said input signal excessively exceeds said input range on the second power-supply potential side,

wherein the first protection means is connected to a first node that also connects the input terminal and the input resistor means, and that the second protection means is connected to a second node that also connects the input resistor means and the operational amplifier means.

3. (Original) The input protection circuit according to claim 1, wherein said input signal conversion section converts said potential of said input signal input from said input terminal in such a way that said potential of said input signal lies in said input range when said potential of said input signal exceeds said first power-supply potential or said second power-supply potential.

4. (Currently Amended) The input protection circuit according to claim 2, wherein said input signal conversion ~~section~~ means converts said potential of said input signal input from said input terminal in such a way that said potential of said input signal lies in said input range when said potential of said input signal exceeds said first power-supply potential or said second power-supply potential.

5. (Original) The input protection circuit according to claim 1, wherein said operational amplifier changes a potential at said virtual ground node by changing a bias potential so as to convert said potential of said input signal input from said input terminal in such a way that said potential of said input signal having exceeded said input range lies in said input range.

6. (Currently Amended) The input protection circuit according to claim 2, wherein said operational amplifier means changes a potential at said virtual ground node by changing a bias potential so as to convert said potential of said input signal input from said input terminal in such a way that said potential of said input signal having exceeded said input range lies in said input range.

7. (Original) The input protection circuit according to claim 1, wherein said feedback resistor has a plurality of resistors and a switch for switching connection of said plurality of resistors.

8. (Currently Amended) The input protection circuit according to claim 2, wherein said feedback resistor means has a plurality of resistors and a switch for switching connection of said plurality of resistors.

9. (Original) The input protection circuit according to claim 1, wherein said operational amplifier is a differential operational amplifier to which said input signal is differentially input.

10. (Currently Amended) The input protection circuit according to claim 2, wherein said operational amplifier means is a differential operational amplifier to which said input signal is differentially input.

11. (New) The input protection circuit according to claim 1, wherein the first power-supply potential supplies a first power level to the internal circuit, and that the second power-supply potential supplies a second power level less than the first power level to the internal circuit.

12. (New) The input protection circuit according to claim 2, wherein the first power-supply potential supplies a first power level to the internal circuit, and that the second power-supply potential supplies a second power level less than the first power level to the internal circuit.

13. (New) The input protection circuit according to claim 1, wherein the first protection section consists of a first diode and the second protection section consists of a second diode.

14. (New) The input protection circuit according to claim 2, wherein the first protection means consists of a first diode and the second protection means consists of a second diode.

15. (New) The input protection circuit according to claim 1, wherein said operational amplifier is biased by a voltage between said first power-supply potential and said second power-supply potential.